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NOV 23 2005
PATENT & TRADEMARK OFFICE

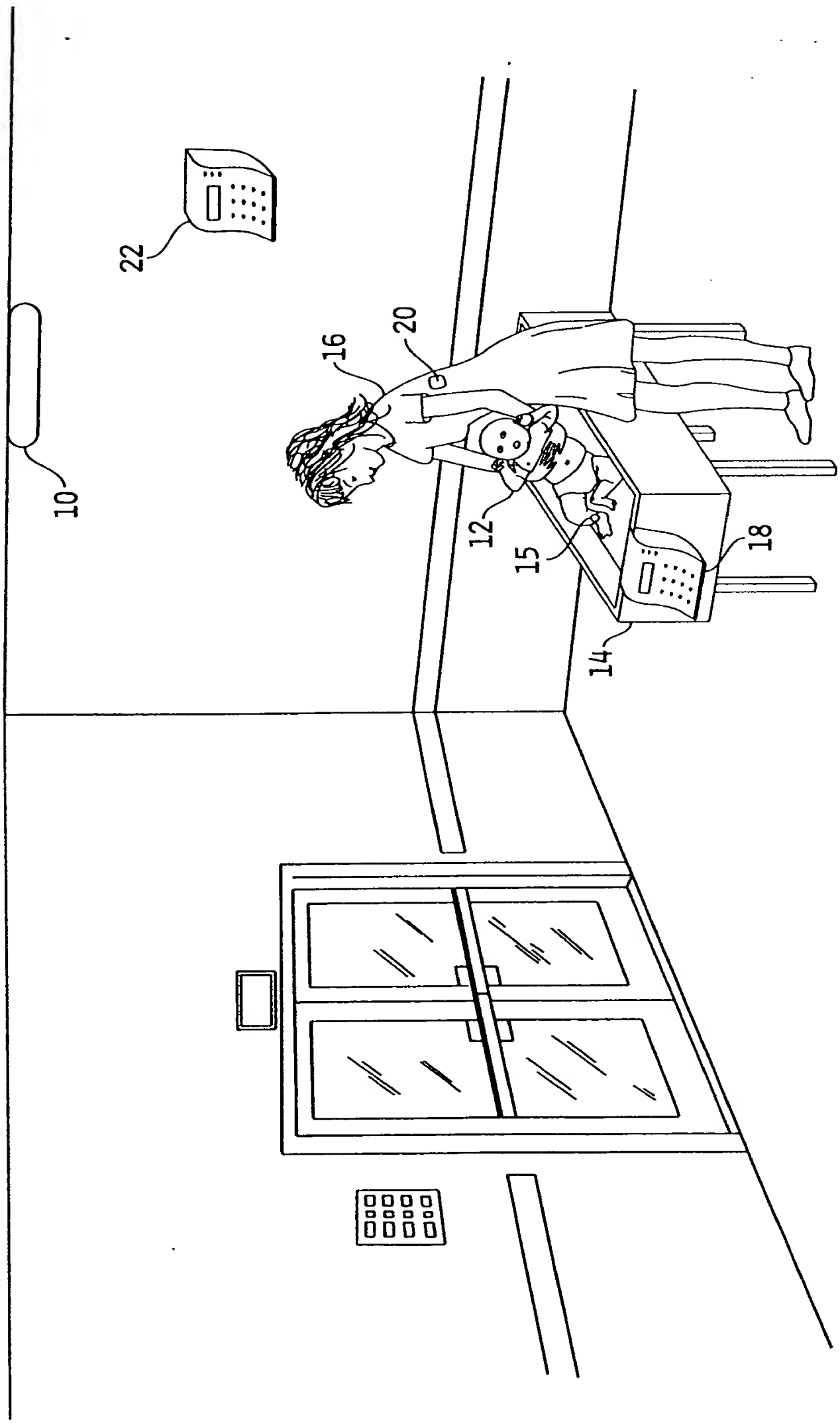


FIG. 1

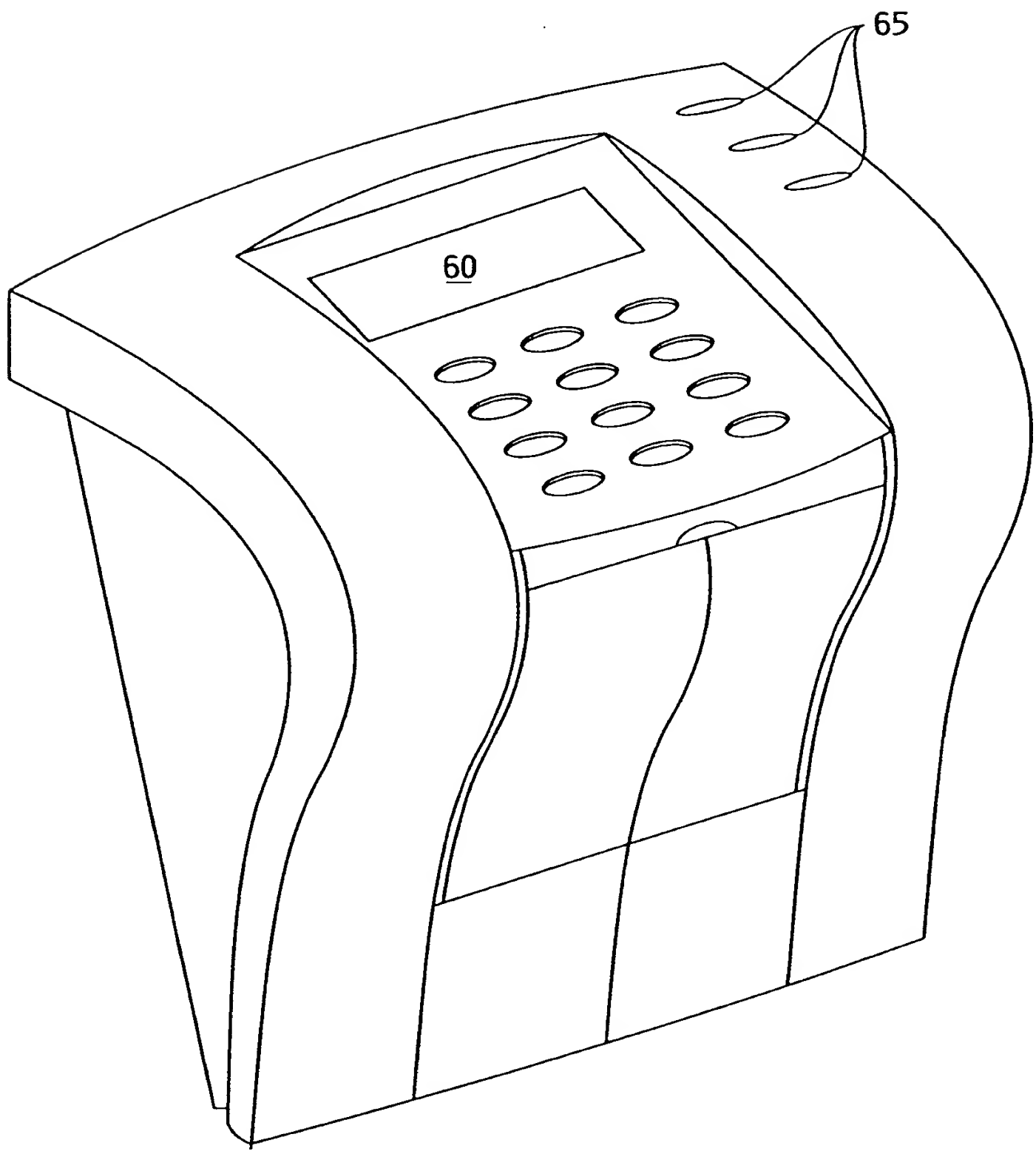


FIG. 2A

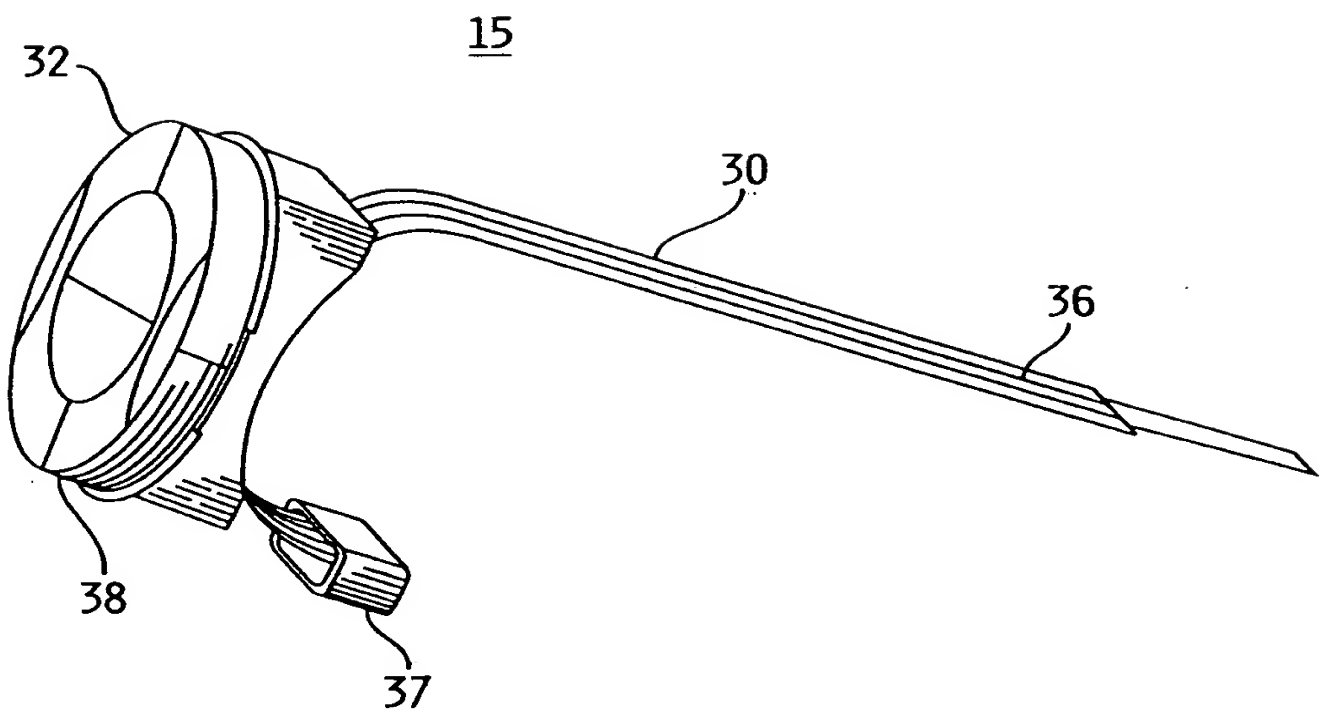


FIG. 2B

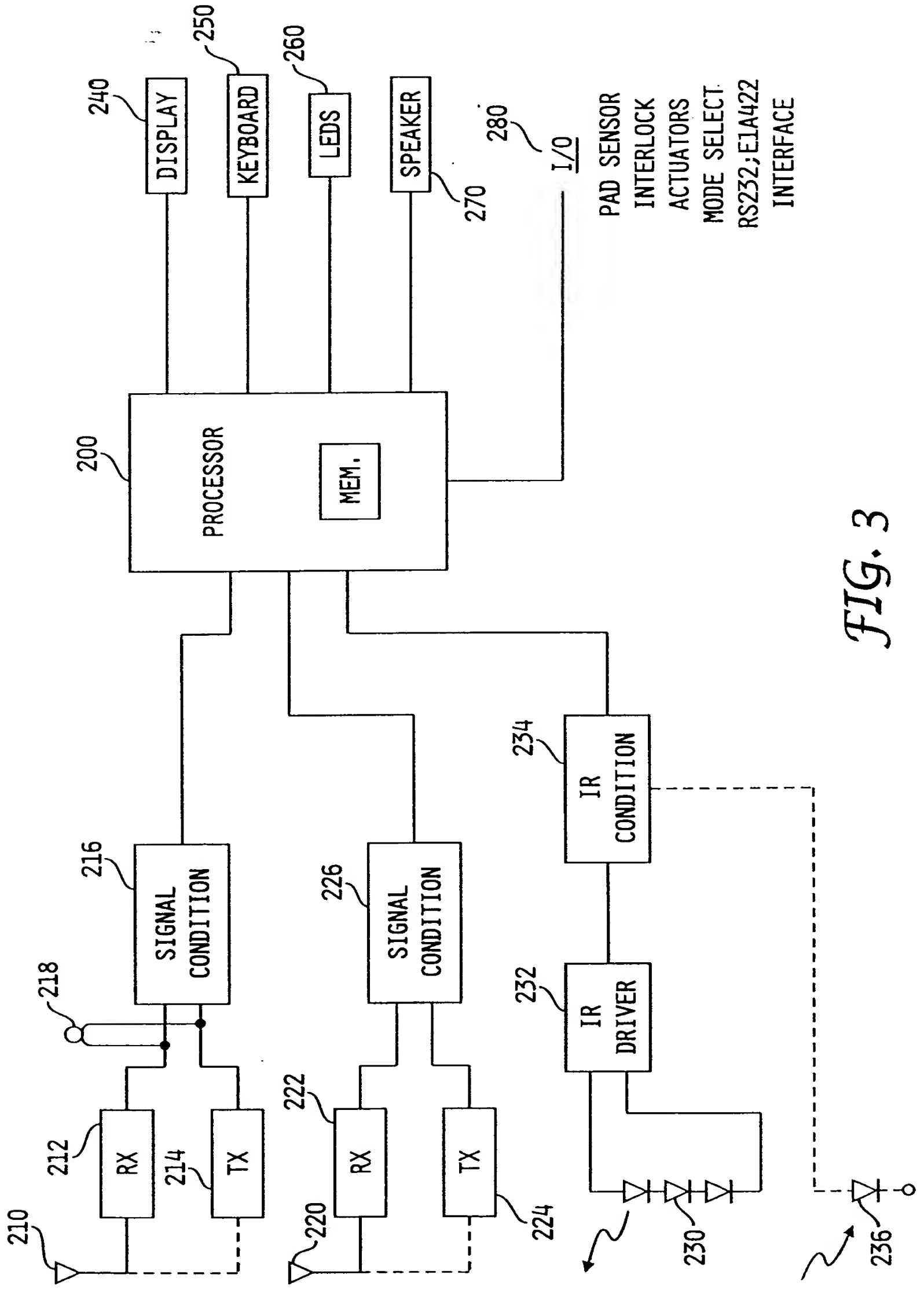

200
PROCESSOR
MEM.
240
DISPLAY
250
KEYBOARD
260
LEDS
SPEAKER
270
280
I/O
PAD SENSOR
INTERLOCK
ACTUATORS
MODE SELECT
RS232;E1A422
INTERFACE
210
212
RX
214
TX
216
SIGNAL CONDITION
218
220
222
RX
TX
224
226
SIGNAL CONDITION
230
232
IR DRIVER
234
IR CONDITION
236

FIG. 3

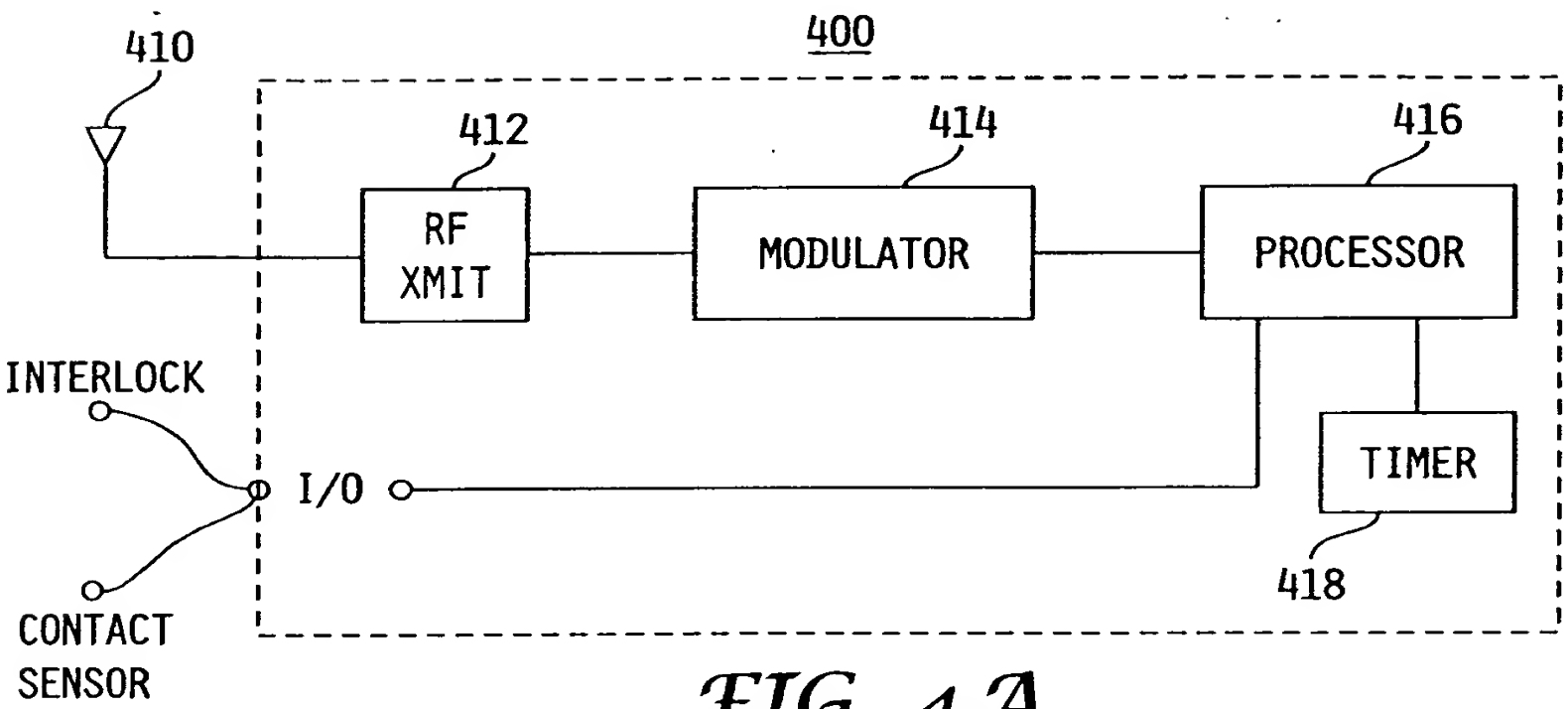

400
410
412
414
416
RF XMIT
MODULATOR
PROCESSOR
INTERLOCK
I/O
TIMER
418
CONTACT SENSOR

FIG. 4A

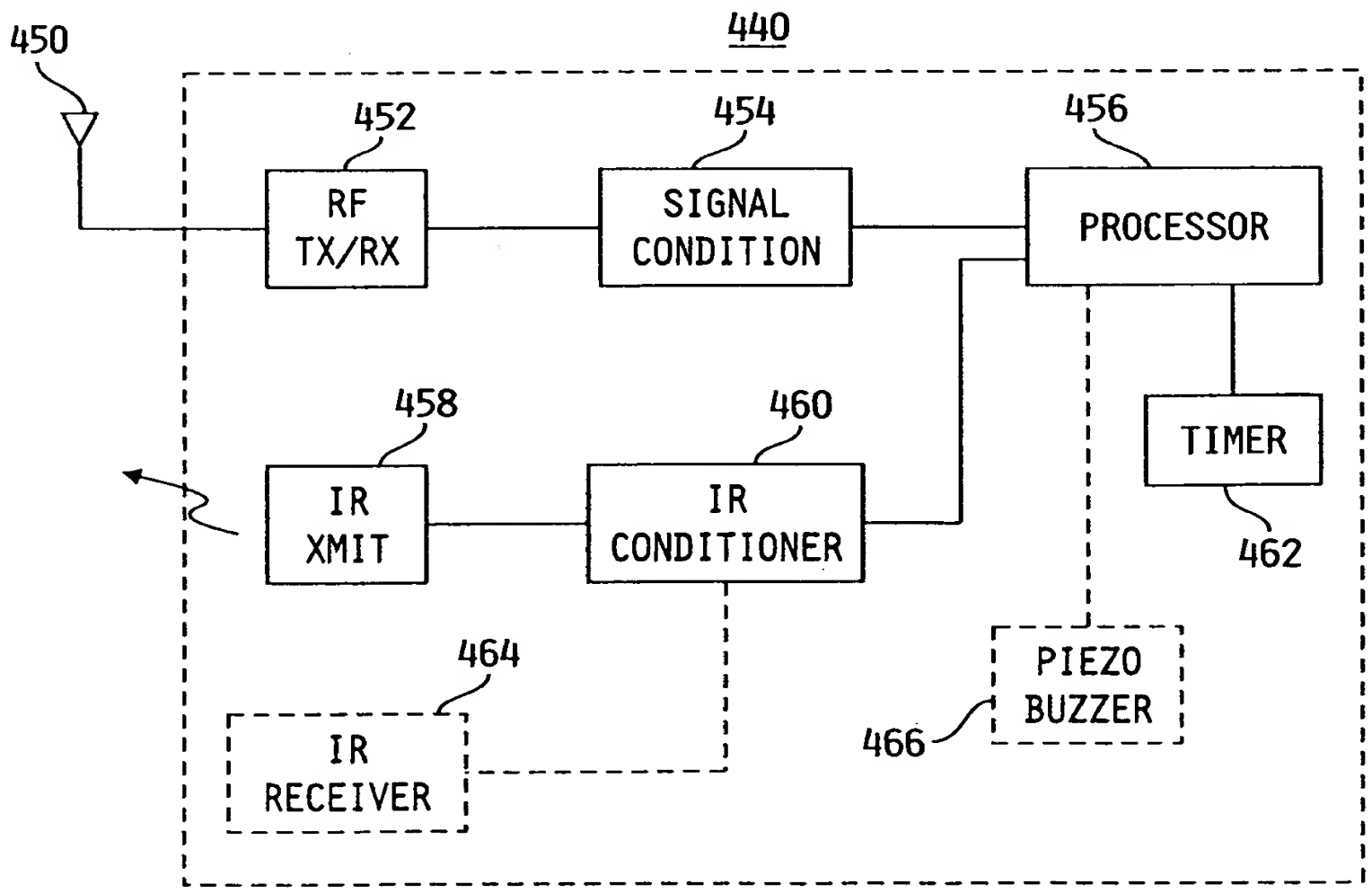
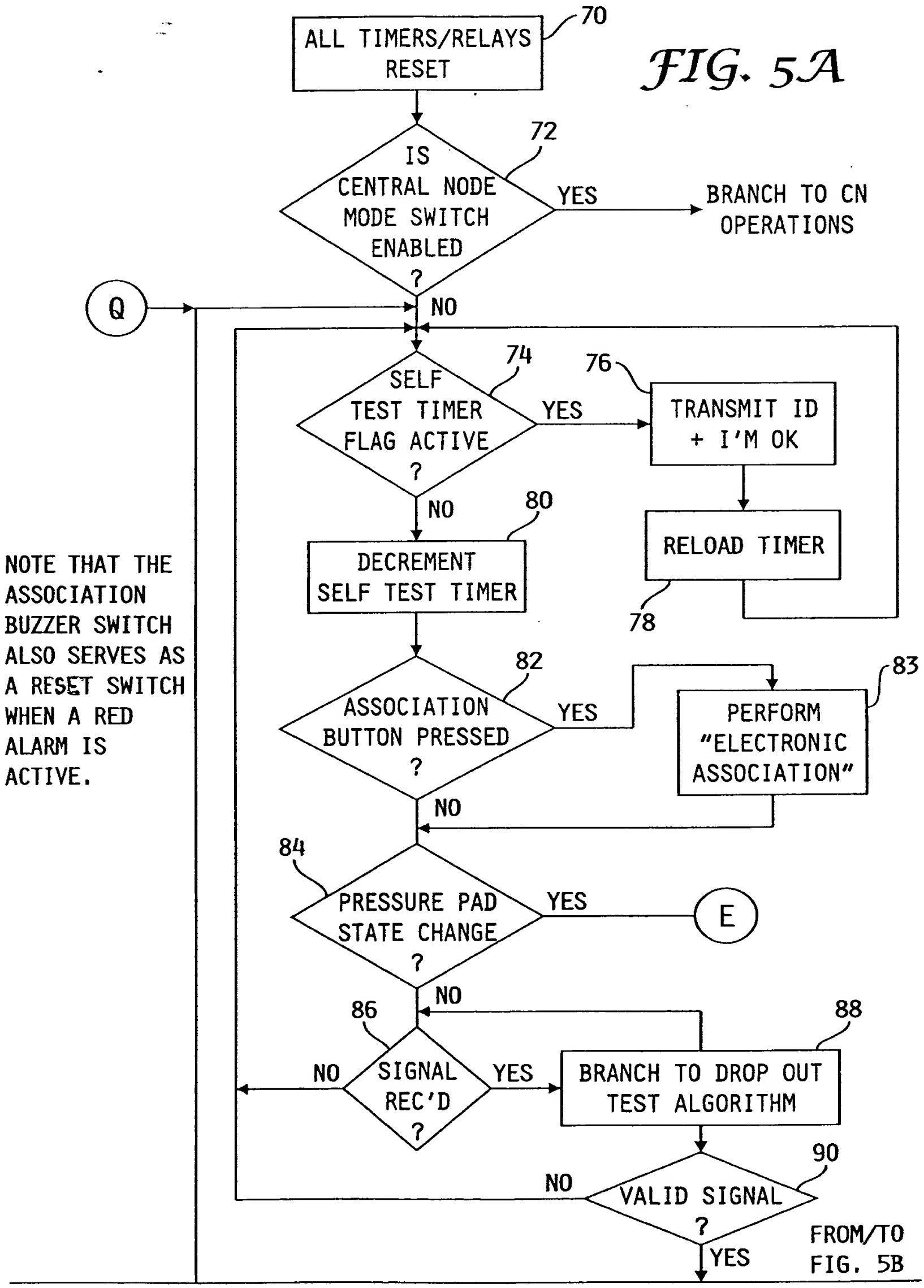

440
450
452
454
456
RF TX/RX
SIGNAL CONDITION
PROCESSOR
458
460
TIMER
IR XMIT
IR CONDITIONER
462
464
PIEZO BUZZER
466
IR RECEIVER

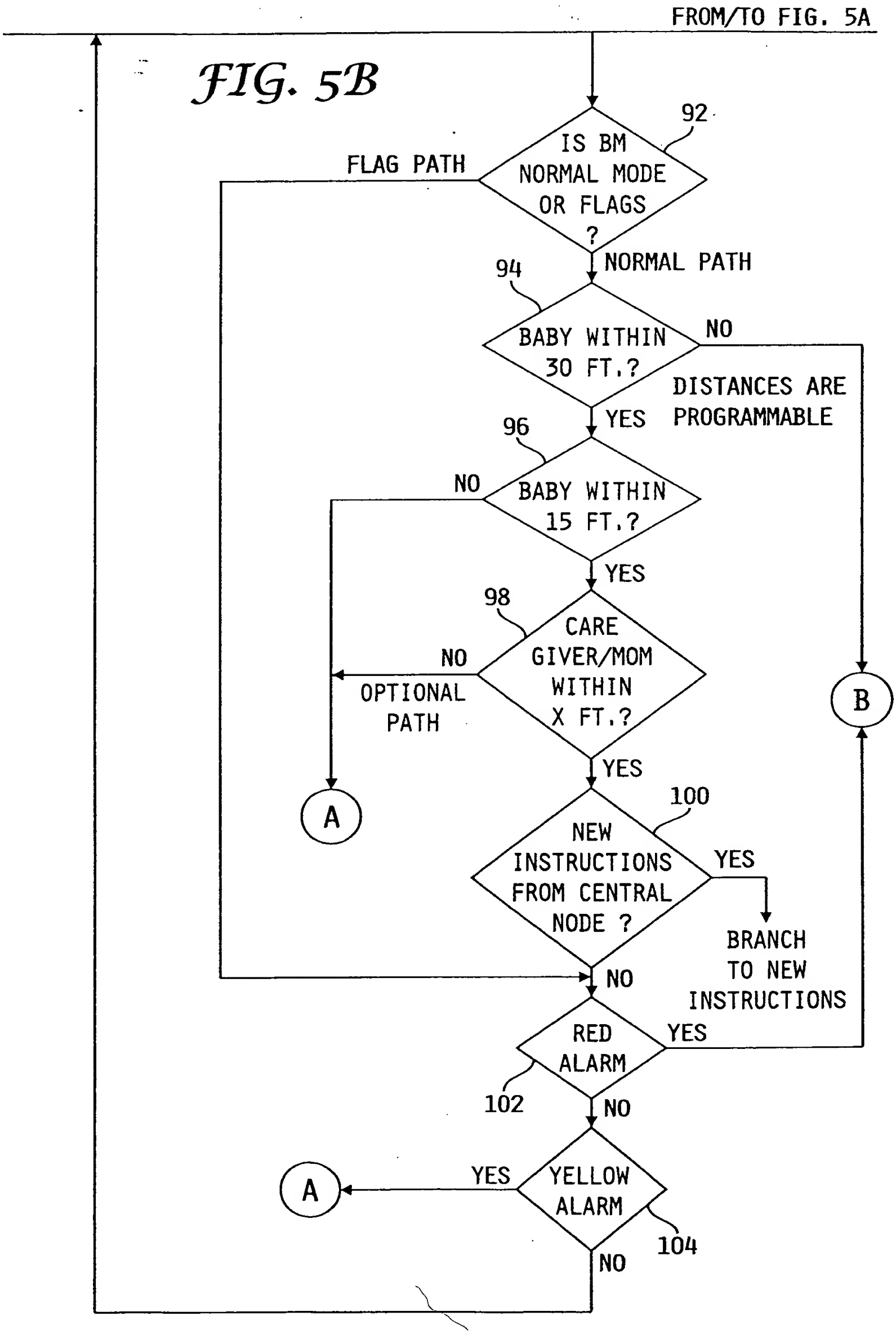
FIG. 4B

FIG. 5A



NOTE THAT THE ASSOCIATION BUZZER SWITCH ALSO SERVES AS A RESET SWITCH WHEN A RED ALARM IS ACTIVE.

FIG. 5B


FROM/TO FIG. 5A
92
IS BM NORMAL MODE OR FLAGS ?
FLAG PATH
NORMAL PATH
94
BABY WITHIN 30 FT.?
NO
DISTANCES ARE PROGRAMMABLE
YES
96
BABY WITHIN 15 FT.?
NO
YES
98
CARE GIVER/MOM WITHIN X FT.?
NO
OPTIONAL PATH
YES
A
100
NEW INSTRUCTIONS FROM CENTRAL NODE ?
YES
BRANCH TO NEW INSTRUCTIONS
NO
RED ALARM
YES
102
NO
YELLOW ALARM
YES
A
104
NO
B

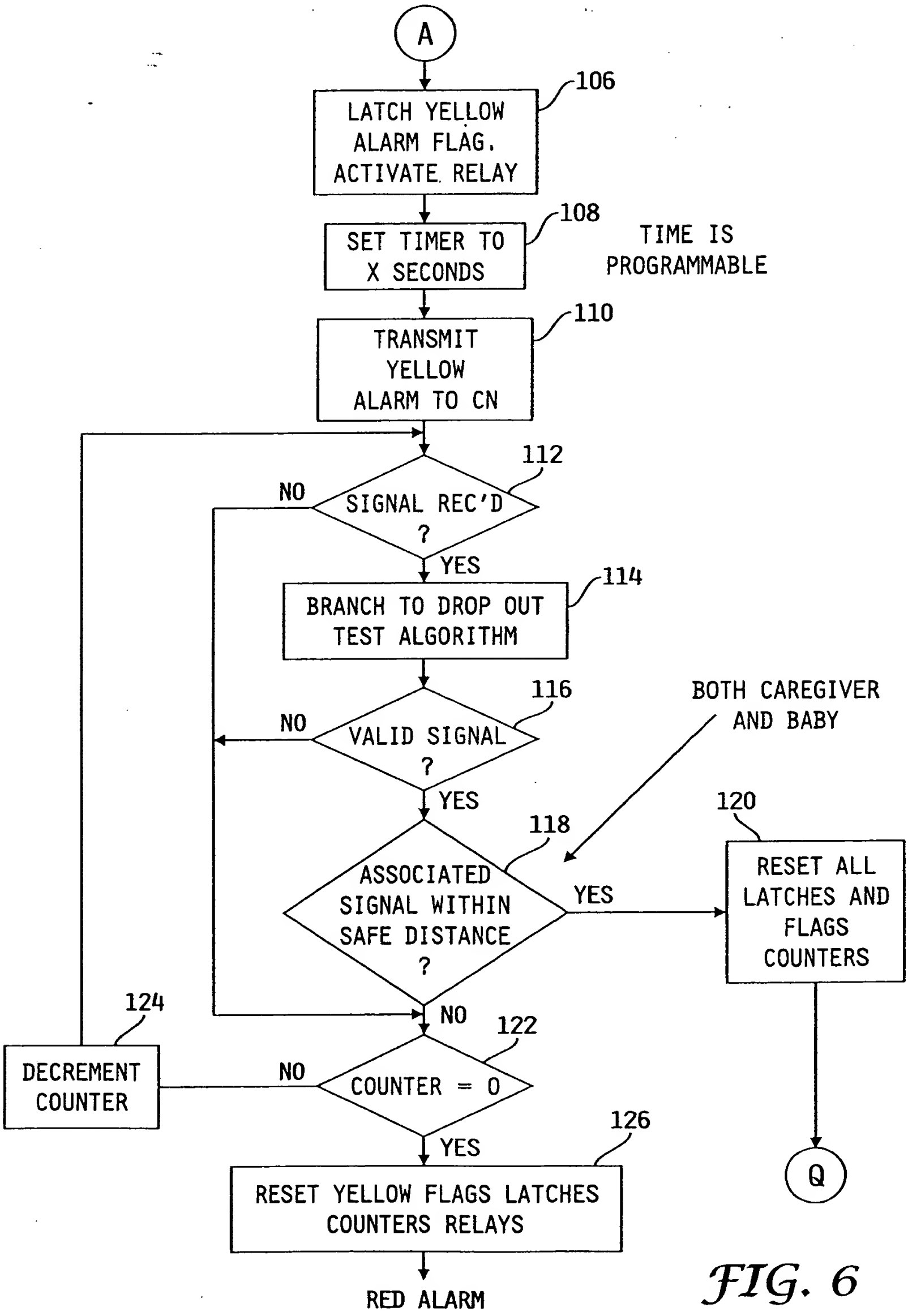
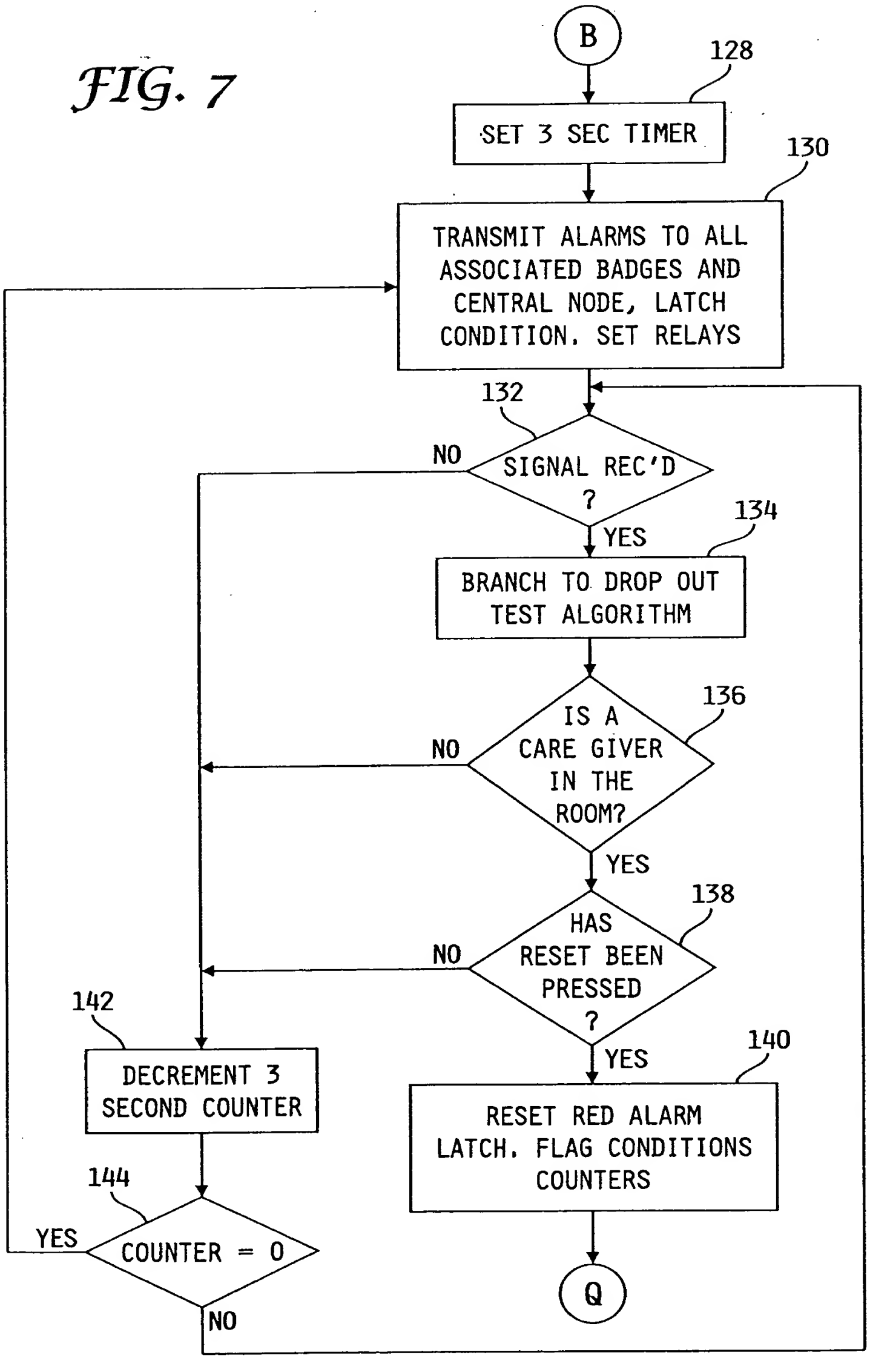

A
106
LATCH YELLOW ALARM FLAG. ACTIVATE RELAY
108
SET TIMER TO X SECONDS
TIME IS PROGRAMMABLE
110
TRANSMIT YELLOW ALARM TO CN
112
NO
SIGNAL REC'D ?
YES
114
BRANCH TO DROP OUT TEST ALGORITHM
116
NO
VALID SIGNAL ?
YES
BOTH CAREGIVER AND BABY
118
ASSOCIATED SIGNAL WITHIN SAFE DISTANCE ?
YES
120
RESET ALL LATCHES AND FLAGS COUNTERS
Q
NO
122
NO
COUNTER = 0
YES
124
DECREMENT COUNTER
126
RESET YELLOW FLAGS LATCHES COUNTERS RELAYS
RED ALARM

FIG. 6

FIG. 7


B
128
SET 3 SEC TIMER
130
TRANSMIT ALARMS TO ALL ASSOCIATED BADGES AND CENTRAL NODE, LATCH CONDITION. SET RELAYS
132
NO
SIGNAL REC'D ?
YES
134
BRANCH TO DROP OUT TEST ALGORITHM
136
NO
IS A CARE GIVER IN THE ROOM?
YES
138
NO
HAS RESET BEEN PRESSED ?
YES
140
RESET RED ALARM LATCH. FLAG CONDITIONS COUNTERS
Q
142
DECREMENT 3 SECOND COUNTER
144
YES
COUNTER = 0
NO

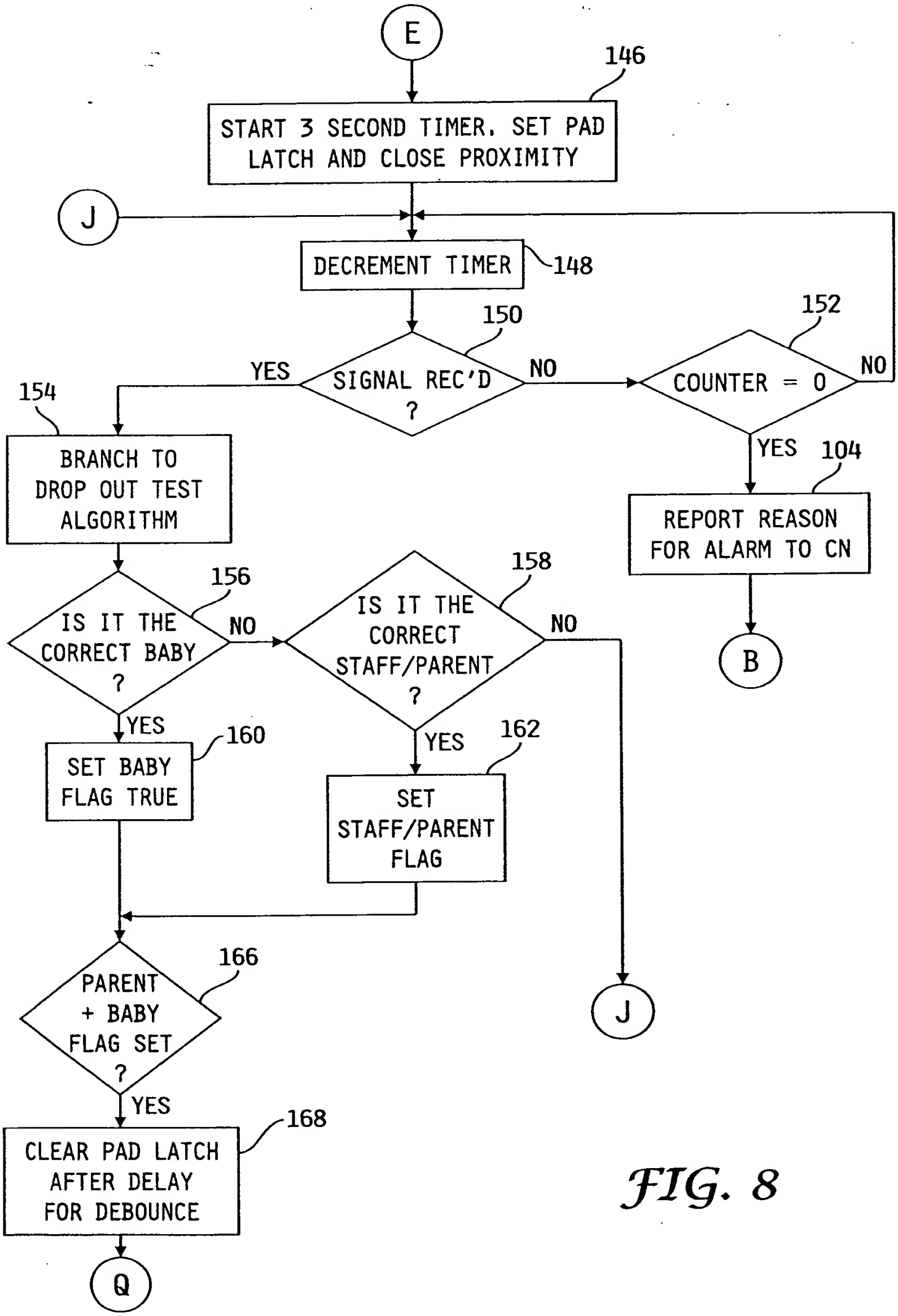

E
146
START 3 SECOND TIMER, SET PAD LATCH AND CLOSE PROXIMITY
J
DECREMENT TIMER
148
150
SIGNAL REC'D ?
YES
NO
152
COUNTER = 0
NO
YES
104
REPORT REASON FOR ALARM TO CN
B
154
BRANCH TO DROP OUT TEST ALGORITHM
156
IS IT THE CORRECT BABY ?
NO
158
IS IT THE CORRECT STAFF/PARENT ?
NO
YES
160
SET BABY FLAG TRUE
YES
162
SET STAFF/PARENT FLAG
J
166
PARENT + BABY FLAG SET ?
YES
168
CLEAR PAD LATCH AFTER DELAY FOR DEBOUNCE
Q

FIG. 8

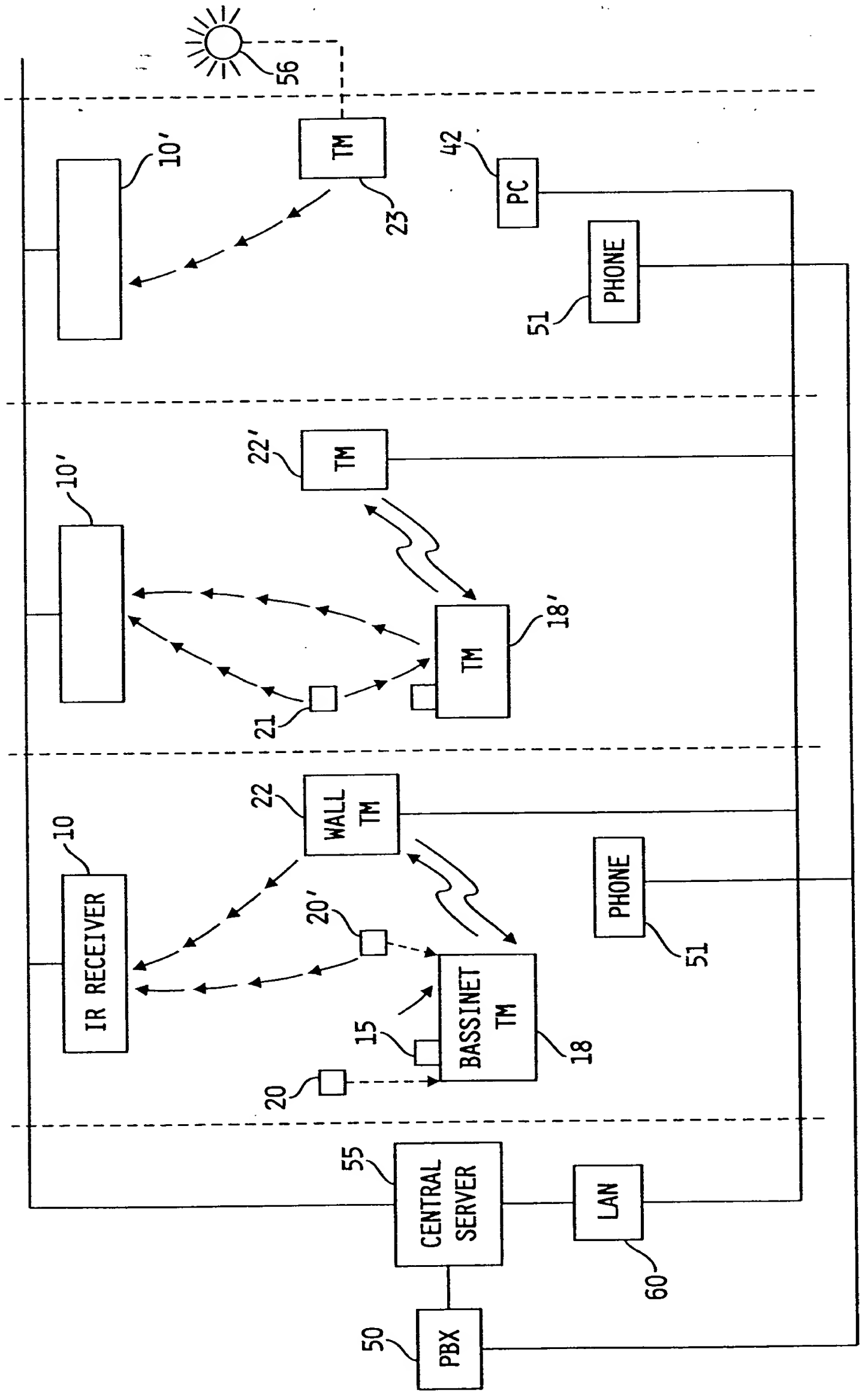

56
10'
TM
23
42
PC
PHONE
51
10'
22'
TM
18'
TM
21
22
WALL TM
10
IR RECEIVER
20'
15
BASSINET TM
18
20
PHONE
51
55
CENTRAL SERVER
LAN
60
50
PBX

FIG. 9